

Title (en)
HEAT PUMP APPARATUS

Title (de)
WÄRMEPUMPENVORRICHTUNG

Title (fr)
APPAREIL DE POMPE À CHALEUR

Publication
EP 2918954 B1 20210922 (EN)

Application
EP 15150355 A 20090305

Priority
• JP 2008223531 A 20080901
• EP 09809630 A 20090305
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Abstract (en)
[origin: EP2320168A1] To provide a heat pump apparatus capable of starting defrosting operation at an optimal timing when efficiency becomes the best. (COP becomes a maximum value) A heat pump apparatus 100 includes a refrigerant circuit in which a compressor 1, a condenser 2, expansion means 3, and an evaporator 4 are serially connected. Condensation temperature detection means 11 that detects a saturation temperature of the condenser 2, and evaporation temperature detection means 12 that detects the saturation temperature of the evaporator 4 are provided. Operation efficiency is estimated by a value obtained by dividing heating ability estimated from a detection value of the condensation temperature detection means 11 by a difference between a detection value of condensation temperature detection means 11 and that of evaporation temperature detection means 12 or dissipation power estimated by the difference.

IPC 8 full level
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CPC (source: EP US)
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Cited by
US10488099B2; WO2019165096A1

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DOCDB simple family (publication)
EP 2320168 A1 20110511; EP 2320168 A4 20150311; EP 2320168 B1 20191009; CN 102138048 A 20110727; CN 102138048 B 20130515; EP 2918954 A1 20150916; EP 2918954 B1 20210922; JP 2010060150 A 20100318; JP 4642100 B2 20110302; US 2011132019 A1 20110609; US 8745999 B2 20140610; WO 2010023975 A1 20100304

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